

RETAINING MICROFLUIDIC MICROCAVITY AND OTHER MICROFLUIDIC STRUCTURES

Patent number: EP1483052
Publication date: 2004-12-08
Inventor: ANDERSSON PER (SE); EKSTRAND GUNNAR (SE)
Applicant: GYROS AB (SE)
Classification:
- **international:** B01L3/00; B01L3/00; (IPC1-7): B01L3/00
- **european:**
Application number: EP20020763153 20020828
Priority number(s): WO2002SE01539 20020828; SE20010003522 20011021; SE20010004077 20011205; WO2002SE00531 20020319; WO2002SE00538 20020319; WO2002SE00539 20020319; WO2002SE00537 20020319; SE20020001310 20020430; US20010315471P 20010828; US20010004424 20011206; US20020376776P 20020430

Report a data error here

Abstract not available for EP1483052

Data supplied from the *esp@cenet* database - Worldwide

(19) World Intellectual Property Organization
International Bureau



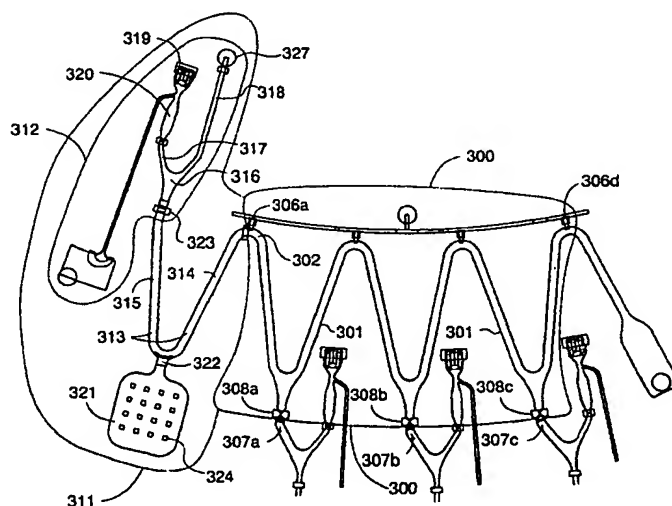
(43) International Publication Date
6 March 2003 (06.03.2003)

PCT

(10) International Publication Number
WO 03/018198 A1

- (51) International Patent Classification⁷: **B01L 3/00**
- (21) International Application Number: PCT/SE02/01539
- (22) International Filing Date: 28 August 2002 (28.08.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
- | | | |
|-----------------|------------------------------|----|
| 60/315,471 | 28 August 2001 (28.08.2001) | US |
| 0103522-9 | 21 October 2001 (21.10.2001) | SE |
| 0104077-3 | 5 December 2001 (05.12.2001) | SE |
| 10/004,424 | 6 December 2001 (06.12.2001) | US |
| PCT/SE 02/00531 | 19 March 2002 (19.03.2002) | SE |
| PCT/SE 02/00538 | 19 March 2002 (19.03.2002) | SE |
| PCT/SE 02/00539 | 19 March 2002 (19.03.2002) | SE |
| PCT/SE 02/00537 | 19 March 2002 (19.03.2002) | SE |
| 0201310-0 | 30 April 2002 (30.04.2002) | SE |
| 60/376,776 | 30 April 2002 (30.04.2002) | US |
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ANDERSSON, Per** [SE/SE]; Botvidsgatan 3 C, S-753 29 Uppsala (SE). **EKSTRAND, Gunnar** [SE/SE]; Gräslöcksgatan 18, S-754 46 Uppsala (SE).
- (74) Agent: **BERGANDER, Håkan**; Gyros AB, Uppsala Science Park, SE-751 83 Uppsala (SE).
- (81) Designated States (national): AU, CA, JP, US.
- (84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR).
- Published:**
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (71) Applicant (for all designated States except US): **GYROS AB** [SE/SE]; Uppsala Science Park, S-751 83 Uppsala (SE).
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RETAINING MICROFLUIDIC MICROCAVITY AND OTHER MICROFLUIDIC STRUCTURES



(57) Abstract: A microfluidic device that comprises several microchannel structures in which there are an inlet port, an outlet port and there between a structural unit comprising a fluidic function. The structural unit can be selected amongst units enabling a) retaining of nl-aliquots comprising constituents which has been defined by mixing of aliquots within the microfluidic device (unit A), b) mixing of aliquots of liquids (unit B), c) partition of larger aliquots of liquids into smaller aliquots of liquids into smaller aliquots of liquids and distributing the latter individually and in parallel to different microchannel structure of the same microfluidic device (unit C), d) quick penetration into a microchannel structure of an aliquot of a liquid dispensed to an inlet port of a microchannel structure (unit D), and e) volume definition integrated within a microchannel structure (unit E). In the preferred variants the device is adapted for using centrifugal force possibly combined with capillarity for driving liquid flow within the microchannel structures.



WO 03/018198 A1